IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): ~~Method~~ A method for ~~the estimation of~~ estimating one or more parameters of a propagation channel with a priori knowledge of ~~the~~ a signal c(t) in a system comprising one or more sensors, ~~wherein~~ the method ~~comprises the following~~ ~~steps~~ comprising:

[[●]] correlating ~~the~~ a signal or signals x(t) received by the ~~sensor or~~ one or more sensors with ~~a known~~ the signal c(t)[[,]];

[[●]] sampling ~~said signal~~ the signal or signals x(t) after correlation at a sampling period Te and selecting a number of samples per concatenation[[,]];and

[[●]] determining at ~~leas tone~~ least one parameter of the propagation channel such as τ ~~and/or~~ or θ which enables ~~the~~ a most efficient reconstruction of the signals received by the one or more sensors using a maximum likelihood method.

Claim 2 (Currently Amended) A method according to claim 1, wherein the characteristics of the system of sensors are known, and wherein[[:]]

[[●]] the ~~known~~ signal c(t) is equal to 1,

[[●]] the signals received on ~~the~~ an antenna are expressed in ~~the~~ a form $X=S(\tau, \theta)h+B$, and

[[●]] ~~the~~ estimates of the parameters τ and θ are expressed in the ~~following~~ form:

$$\hat{\theta}, \hat{\tau} = \arg\min_{\theta,\tau} \| \Pi_S^{\perp} (\theta, \tau) X \|^2$$
$$= \arg\min_{\theta,\tau} \left\{ X^{\dagger} \Pi_S^{\perp} (\theta, \tau) X \right\}$$

where $\Pi^{\perp}s$ is ~~the~~ a projector orthogonal to ~~the~~ an image generated by the column vectors of $S(\theta, \tau)$.

Claim 3 (Currently Amended): A method according to ~~one of the claims 1 or 2~~ claim 1, further comprising ~~a step for~~ determining ~~the~~ complex amplitudes **h** of ~~the~~ an impulse response of the propagation channel from ~~the~~ estimates of the ~~estimated~~ parameters τ and θ.

A 3 (cont'd)

Claim 4 (Currently Amended): A method according to claim 1 wherein ~~the~~ characteristics of the system of one or more sensors are not known, ~~and the method comprises for example:~~ and wherein

[[•]]~~a step for the correlation of the signals x(t) received by the network of sensors with a known~~ the signal c(t) is equal to 1,

[[•]]concatenated form $\mathbf{Y} = \psi(\tau)\alpha + N$, where $\psi(\tau)$ is equal to the convoluted product of the unit matrix I_N and ~~the~~ a matrix[[,]] $S(\tau) = \left[s^1(\tau_1^1), \ldots, s^1(\tau_{P_1}^1), \ldots, s(\tau_{PU}^U)\right]$, and α contains ~~the~~ responses of ~~the~~ paths of ~~the~~ different users,

[[•]]~~a step for the estimation of the~~ delay vectors τ are estimated from

$$\hat{\tau} = \arg\min_{\tau} \| \Pi_{\Psi}^{\perp}(\tau) Y \|^2$$
$$= \arg\min_{\tau} \mathrm{tr}(Y^T \Pi_{\Psi}^{\perp}(\tau) Y)$$

where $\Pi_{\Psi}^{\perp}$ is ~~the~~ a projector orthogonal to ~~the~~ an image generated by ~~the~~ line vectors of $\psi(\tau)$.

Claim 5 (Currently Amended): A method according to claim 1, ~~comprising a step of correlation of the signals with a~~ wherein the signal c(t) is different from 1, and wherein the

characteristics of the system of one or more sensors are known and ~~this correlation step comprises a step for the estimation of the~~ parameters τ and θ are estimated from

$$\theta,\tau = \arg\min_{\theta,\tau} Y^{\omega} R_b^{-1} \Pi_{\Phi}^{\perp}(\theta,\tau)\ X^{\omega}$$

$$\Pi_{\Phi}^{\perp} = I - \Phi(\theta,\tau)(\Phi^{\dagger}(\theta,\tau)R_b^{-1}\Phi(\theta,\tau))^{-1}\Phi^{\dagger}(\theta,\tau)R_b^{-1}$$

Claim 6 (Currently Amended): A method according to claim 1, ~~comprising a step of correlation of the signals with a~~ wherein the signal c(t) is different from 1, and wherein[[,]] the characteristics of the system of one or more sensors ~~being~~ is unknown~~, the estimation of the~~ and a delay vector is expressed by ~~means of:~~

where

$$\hat{\tau}. = \arg\min_{\tau} Y^{\omega} R_n^{-1} \Pi_s^{\perp}(\tau) Y^{\omega}$$

$$\Pi_s^{\perp} = I - S(\tau)(S(\tau)R_n^{-1}S(\tau))^{-1}S(\tau)R_n^{-1}$$

Claim 7 (Currently Amended): A method according to one of the claims 1 to 6, applied in MIMO (Multiple Input Multiple Output) or SIMO (Single Input ~~Single~~ Multiple Output) type applications.

Claim 8 (Currently Amended): A device for estimating one or more parameters of a propagation channel with a priori knowledge of ~~the~~ a signal c(t) in a system comprising one or more sensors s(t), the device comprising ~~at least~~:

[[•]] a device adapted to ~~the correlation of the signal~~ correlate a signal or signals x(t) received by the ~~sensor or~~ one or more sensors s(t) with ~~a known~~ the signal c(t),

[[•]] ~~a device adapted to the selection of a number of samples of the signal obtained after the correlation step, and~~

[[•]] a device adapted to ~~the determining of the~~ determine parameters of the propagation channel, including τ or θ, which enables a most efficient reconstruction of the signal or signals x(t) by a maximum likelihood method.

(A3 Cancel)

Claim 9 (Currently Amended): A radiocommunications receiver comprising the ~~characteristics of the~~ device according to claim 8.